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UTILITY  
PATENT APPLICATION  
TRANSMITTAL

(Only for new nonprovisional applications under 37 CFR 1.53(b))

Attorney Docket No. BP3134CIP

First Inventor Ba-Zhong Shen, Ph.D.

Title LDPC (Low Density Parity Check) coded modulation hybrid  
decoding using non-Gray code maps for improved performance

Express Mail Label No. EV 217697590 US

## APPLICATION ELEMENTS

See MPEP chapter 600 concerning utility patent application contents.

## ADDRESS TO:

Mail Stop Patent Application  
Commissioner for Patents  
P.O. Box 1450  
Alexandria VA 22313-1450

1. ☒ Fee Transmittal Form (e.g., PTO/SB/17)  
(Submit an original and a duplicate for fee processing)
2. ☐ Applicant claims small entity status.  
See 37 CFR 1.27.
3. ☒ Specification [Total Pages 105]  
(preferred arrangement set forth below)
- Descriptive title of the invention
  - Cross Reference to Related Applications
  - Statement Regarding Fed sponsored R & D
  - Reference to sequence listing, a table,  
or a computer program listing appendix
  - Background of the Invention
  - Brief Summary of the Invention
  - Brief Description of the Drawings (if filed)
  - Detailed Description
  - Claim(s)
  - Abstract of the Disclosure
4. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 48]
5. Oath or Declaration [Total Sheets 3]
- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 CFR 1.63(d))  
(for continuation/divisional with Box 18 completed)
- i. ☐ **DELETION OF INVENTOR(S)**  
Signed statement attached deleting inventor(s)  
name in the prior application, see 37 CFR  
1.63(d)(2) and 1.33(b).
6. ☐ Application Data Sheet. See 37 CFR 1.76

7. ☐ CD-ROM or CD-R in duplicate, large table or  
Computer Program (Appendix)
8. Nucleotide and/or Amino Acid Sequence Submission  
(if applicable, all necessary)
- a. ☐ Computer Readable Form (CRF)
- b. Specification Sequence Listing on:
- i. ☐ CD-ROM or CD-R (2 copies); or
- ii. ☐ Paper
- c. ☐ Statements verifying identity of above copies

## ACCOMPANYING APPLICATION PARTS

9. ☒ Assignment Papers (cover sheet & document(s))
10. ☐ 37 CFR 3.73(b) Statement ☐ Power of  
(when there is an assignee) Attorney
11. ☐ English Translation Document (if applicable)
12. ☐ Information Disclosure ☐ Copies of IDS  
Statement (IDS)/PTO-1449 Citations
13. ☐ Preliminary Amendment
14. ☒ Return Receipt Postcard (MPEP 503)  
(Should be specifically itemized)
15. ☐ Certified Copy of Priority Document(s)  
(if foreign priority is claimed)
16. ☐ Nonpublication Request under 35 U.S.C. 122  
(b)(2)(B)(i). Applicant must attach form PTO/SB/35  
or its equivalent.
17. ☒ Other: 1. Letter of Authorization  
2. PTO-2038 Forms for \$1608 and \$40

18. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in the first sentence of the  
specification following the title, or in an Application Data Sheet under 37 CFR 1.76:☐ Continuation☐ Divisional☒ Continuation-in-part (CIP)

of prior application No.: 10/723,574 filed 11/26/2003

Prior application information:

Examiner

Art Unit:

For CONTINUATION OF DIVISIONAL APPS only; The entire disclosure of the prior application, from which an oath or declaration is supplied under Box  
5b, is considered a part of the disclosure of the accompanying continuation or divisional application and is hereby incorporated by reference.  
The incorporation can only be relied upon when a portion has been inadvertently omitted from the submitted application parts.

## 19. CORRESPONDENCE ADDRESS



Customer Number:

34399

OR ☒

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Registration No. (Attorney/Agent)

45,105

Signature

Date

03/16/2004

This collection of information is required by 37 CFR 1.53(b). The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop Patent Application, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

16834 U.S. PTO

10/802011

031604

**FEE TRANSMITTAL  
for FY 2001**

Patent fees are subject to annual revision.

**TOTAL AMOUNT OF PAYMENT** (\$) \$1648.00**Complete if Known**

Application Number	
Filing Date	
First Named Inventor	Ba-Zhong Shen, Ph.D.
Examiner Name	
Group Art Unit	
Atty Docket No.	BP3134CIP

**METHOD OF PAYMENT**

- 1.
- ☐
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayments to:

Deposit  
Account  
NumberDeposit  
Account  
Name☐ Charge Any Additional Fee Required  
Under 37 CFR 1.16 and 1.17☐ Applicant claims small entity status.  
See 37 CFR 1.27

- 2.
- ☒
- Payment Enclosed:**

☐ Check ☒ Credit card ☐ Money  
Order ☐ Other**FEE CALCULATION****1. BASIC FILING FEE**

Fee Description

Fee Paid

Utility filing fee	770.00
Design filing fee	
Plant filing fee	
Reissue filing fee	
Provisional filing fee	

**SUBTOTAL(1)** (\$) \$770.00**2. EXTRA CLAIM FEES**

Fee From Below

Extra Claims

Fee Paid

Total Claims	57	-20**	37	X	18	=	666.00
Independent Claims	5	-3**	2	X	86	=	172.00
Multiple Dependent						=	

Fee Description

Claims in excess of 20

Independent claims in excess of 3

\*\*Reissue independent claims over original patent

\*\*Reissue claims in excess of 20 and over original patent

**SUBTOTAL (2)** (\$) 838.00

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3.. ADDITIONAL FEES****Fee Description**

Surcharge-late filing fee or oath

Surcharge- late provisional filing fee or cover sheet

Non-english specifications

For filing a request for ex parte reexamination

Requesting publication of SIR prior to Examiner action

Requesting publication of SIR after Examiner action

Extension for reply within first month

Extension for reply within second month

Extension for reply within third month

Extension for reply within fourth month

Extension for reply within fifth month

Notice of Appeal

Filing a brief in support of appeal

Request for oral hearing

Petition to institute a public use proceeding

Petition to revive - unavoidable

Petition to revive unintentional

Utility Issue Fee (or reissue)

Design Issue Fee

Plant Issue Fee

Petitions to the Commissioner

Processing fee under 37 CFR 1.17(q)

Submissions of Information Disclosure Stmt

Recording each patent assignment per property (times number of properties)

Filing a submission after final rejection (37 CFR 1.129(a))

For each additional invention to be examined (37 CFR 1.129(b))

Request for Continued Examination (RCE)

Request for expedited Examination of design application

Other fee (specify)

Reduced by Basic Filing Fee Paid

**SUBTOTAL (3)**

\$40.00

\$40.00

**SUBMITTED BY**

Complete (if applicable)

Name (Print Type) Shayne X. Short, Ph.D.

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Signature

SX Short

Date 3/16/2004